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Symposium on ERTS Investigations

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An Evaluation of Space Acquired Data as a Tool
For Management of Wildlife Habitat in the State of Alaska

ERTS data was analyzed and interpreted using color coded densitometric displays and digital processes to provide information on floristic phenology, vegetation zone mapping, and surface hydrology of the Yukon-Kuskokwim Delta.

The ERTS acquired data on vegetation and hydrology were compared with existing vegetation and surface water maps covering 70 percent of one ERTS frame. Multispectral (I²S) photographic data were acquired in an adjunctive effort, and subjected to the same analyses and interpretation as ERTS data.

It was concluded that ERTS data, with adequate verification from quadrat in situ sampling, could be extrapolated to describe accurately the vegetative characteristics of scenes far removed from the sample site.

Hydrologic data--surface acres of water--were immediately obtainable for a delta area containing thousands of small ponds important to wildlife and the production of waterfowl. Minimum pond size measurable from ERTS data was approximately 5 acres.

The application of the two techniques has great potential for developing accurate vegetation and hydrologic maps for millions of square miles in Alaska.

Multispectral photography (I²S) has not yet been compared with ground data to ascertain its adequacy as a substitute for the ground acquired data now considered essential to interpretation of ERTS data.

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15. Supplementary Notes					
<p>16. Abstract</p> <p>Auser facility containing all ERTS Alaska data and some low-altitude I²S imagery was established in Anchorage to serve 13 State and Federal user agencies. These user agencies are coordinating their efforts to minimize duplication of ground and aircraft operations.</p> <p>Interpretation of ERTS imagery by color-coded densitometric displays and digital processes data verified that with adequate quadrat in situ sampling ERTS data could be extrapolated to describe accurately the vegetative characteristics of analogous sites, and that surface acres of water for waterfowl production were obtainable for ponds a minimum of 5 acres in size.</p>					
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AN EVALUATION OF SPACE ACQUIRED DATA AS A TOOL FOR WILDLIFE
MANAGEMENT IN ALASKA

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1 May 1973

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Type II Progress Report
ERTS-1

(Cover Sheet)

- a. Title: An Evaluation of Space Acquired Data as a Tool for Wildlife Management in Alaska.
- b. GSFC ID No.: I077
- c. State and explanation of any problems that are impeding the progress of the investigation:

Travel restrictions imposed on the Bureau of Sport Fisheries and Wildlife since October, 1972, have hampered the coordination of field activities and prevented presentation of professional papers on the project.

- d. Discussion of the accomplishments during the reporting period and those planned for the next reporting period:

A user facility was established at the Bureau of Sport Fisheries and Wildlife office in Anchorage. A zoom transferscope, an I²S Mini Adcol color combining viewer and other equipment have been purchased for the facility.

All ERTS Alaska data and some low altitude I²S imagery are on file. ERTS data includes tapes, prints, and 70mm positives.

The half-time services of one GS 14 BSFW employee have been dedicated to this job (Position Description attached).

In concert with this operation, a user group comprised of the following agencies was formed in Anchorage.

BSFW
USGS
Forest Service
Coast Guard
Federal/State Land Use Planning Commission
Alaska Department of Fish and Game
Alaska State Planning Department

Agriculture Research Station
National Park Service
NOAA
National Marine Fisheries Service
University of Alaska Marine Science Institute
Bureau of Land Management

The P. I. called together these and other agencies, and through two meetings with the group developed the following program:

1. The user group's primary function is to cooperate in a coordinated effort to minimize duplication of ground and air-craft operations and to maximize the resources available for ground and aerial surveys in support of ERTS data.
 2. The group will operate under the aegis of the Federal/State Land Use Planning Commission
 3. Each agency prepared prioritized lists of areas of interest to them from the standpoint of conducting ground and aerial surveys.
 4. The P. I. prepared a letter signed by Secretary of the Interior to Secretary of the Navy asking for the use of Navy Photo Recon Squadron VQ-1 for the summer of 1973. The request has been granted tentatively and the lists prepared in 3 above will serve as the guide for operation of two RA3-B aircraft during the summer. This work will be done on a gratis basis.
- e. Discussion of significant scientific results and their relationship to practical applications or operational problems including estimates of the cost benefits of any significant results (To be prepared in scientific abstract form of 200 words or less):
- Abstract attached
- f. A listing of published articles, and/or papers, pre-prints, in-house reports, abstracts of talks, that were released during the reporting period:

A paper on the experiment was given at the ERTS-1 Symposium on March 6, 1973.

- g. Recommendation concerning practical changes in operations, additional investigative effort and/or results as related to a maximum utilization of the ERTS system:

None

- h. A listing by date of any changes in Standing Order Forms:

None

- i. ERTS Image Descriptor forms:

Nothing to report

- j. Listing by date of any changed Data Request forms submitted to Goddard Space Flight Center/NDPF during the reporting period:

None

- k. Status of Data Collection Platforms (if applicable):

Not applicable